

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original) A drying method for drying a coating layer which is formed by coating a moving web with a coating solution containing organic solvent, comprising steps of:

transporting almost vertically and upward said web immediately after the coating;

inclining with one or larger number of guide rollers the upward transporting of said web from an almost vertical direction toward a horizontal direction gradually; and

drying said coating layer with a drying device having a casing which surrounds said web just after the coating while disturbance of wind close to a coating surface is prevented, and concentration of said solvent vapor in a side of a surface of said coating layer is kept high.

2. (original) A drying method claimed in claim 1, wherein said one or plural guide rollers are disposed within said drying device.

3. (currently amended) A drying method claimed in claim 1 [[or 2]], wherein said transporting direction is directed

upwardly with 60°-90° inclination to a horizontal direction, and said coating surface is positioned upside.

4. (currently amended) A drying method claimed in claim 1, [[2 or 3,]] wherein velocity of said wind inside said drying device is less than 0.1 m/s in a situation in which the transport of said web is stopped.

5. (currently amended) A drying method claimed in claim 1, [[2, 3 or 4]] wherein said coating layer is dried by a heat-drying means disposed downstream from said drying device.

6. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, or 5,~~ wherein an interval between a coating position and said first guide roller disposed closest to said coating position within said drying device relative said transporting direction of said web is less than 2m.

7. (original) A drying method claimed in claim 6, wherein other guide rollers disposed downstream from said first guide roller are disposed with at most 2m interval.

8. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, or 7,~~ wherein said drying device is disposed within 0.7m after the coating.

9. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7 or 8,~~ wherein a device for condensing and recovering said organic solvent in said coating solution on said coating surface at said transporting position of said web within said drying device.

10. (original) A drying method claimed in claim 9, wherein a plate-like member is used for said device for condensing and recovering.

11. (currently amended) A drying method claimed in claim 9 [[or 10]], wherein each said device is disposed in a space formed by partitioning an inside of said drying device with said guide rollers.

12. (currently amended) A drying method claimed in claim 10 [[or 11]], wherein said plate-like member is provided for a cooling apparatus, and temperature of said plate member is adjustable with use of said cooling apparatus.

13. (currently amended) A drying method claimed in claim 10, ~~11 or 12,~~ wherein a flow path in which said condensed organic solvent flows in effect of gravity is provided on a surface of said plate-like member.

14. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13,~~ wherein side plates are disposed on both sides of said drying device, or said sides are tightly closed so as to prevent said solvent vapor from said coating layer from flowing out of said both sides of said drying device.

15. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14,~~ wherein a content of said organic solvent in said coating solution is at least 50% by mass.

16. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, or 15,~~ wherein said drying device dries at least 70% by mass of said organic solvent contained in said coating solution.

17. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 or 16,~~ wherein there is a heating device in a side of a non-coating surface of a transport position of said web within said drier.

18. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 or 17,~~ wherein a thickness of said wet coating layer is at most 50 μ m.

19. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 or 18,~~ wherein an extrusion die coater is used to apply said coating solution on said web supported by a back-up member.

20. (currently amended) A drying method claimed in claim 1, ~~2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 or 18,~~ wherein at least a wire bar coater or a graver coater is used to apply said coating solution on said web.

21. (original) A drying apparatus for drying a coating layer which is formed by coating a moving web with a coating solution containing organic solvent, comprising:

one or more number of guide rollers for gradually inclining said upwardly transported web just after the coating from an almost vertical direction to a horizontal direction; and

a casing for surrounding said web just after the coating, such that disturbance of wind close to a coating surface may be prevented, and a concentration of said solvent vapor in a side of a surface of said coating layer may be kept high.

22. (original) A drying apparatus claimed in claim 21, wherein a blow-drying apparatus is disposed downstream from said drier.

23. (original) A drying method for drying a coating layer which is formed by coating a moving web with a coating solution containing organic solvent, comprising steps of:

drying said web surrounded by a casing at a transporting position just after the coating with a drying device, so as to prevent disturbance of wind closed to a coating surface, said drying device having a heating means;

heating with said heating means, such that a temperature difference $|T2-T1|$ between a temperature $T1$ of said coating layer at an entrance of said drying device and a temperature $T2$ of said coating layer at an exit of said drying device at most 5°C .

24. (original) A drying method as claimed in claim 23, wherein said heating means heats so that a temperature difference $|T3-T1|$ between said temperature $T1$ of said coating layer at said entrance of said drying device and a temperature $T3$ of said coating layer $T3$ of said coating layer in said drying device is at most 5°C .

25. (currently amended) A drying method as claimed in claim 23 [[or 24]], wherein said drying device does not blow and discharge a wind.

26. (currently amended) A drying method as claimed in claim 23, ~~24 or 25~~, wherein said drying is made while a solvent vapor above a side of the coating surface within said drying device is kept at high concentration in a middle of drying.

27. (currently amended) A drying method as claimed in claim 23, ~~24, 25 or 26~~, wherein said coating layer is dried by a blow-drying apparatus disposed downstream from said drying device.

28. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26 or 27~~, wherein said drying device is disposed downstream at most 0.7m after the coating.

29. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27 or 28~~, wherein a device for condensing and recovering a solvent vapor evaporated from said coating layer is disposed in a side of a coating surface at a transporting position of said web within said drying device.

30. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27, 28 or 29,~~ wherein a content of said organic solvent in said coating solution is at least 50% by mass.

31. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27, 28, 29, 30,~~ wherein said drying device dries at least 70% by mass of said organic solvent in said coating solution.

32. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27, 28, 29, 30 or 31,~~ wherein an infrared ray heater is used as said heating means.

33. (original) A drying method as claimed in claim 32, wherein a temperature of water is controlled in the range of 40°C to 80°C with use of said infrared ray heater, and said water is used as said heating means.

34. (currently amended) A drying method as claimed in claim 32 ~~[[or 33]]~~, wherein said infrared ray heater has a box shape.

35. (currently amended) A drying method as claimed in claim 32, ~~33 or 34,~~ wherein said infrared ray heater is disposed 10mm to 50mm apart from said web.

36. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 or 35,~~ wherein a guide roller is disposed within said drying device, and said guide roller is a roller whose temperature is controlled.

37. (currently amended) A drying method as claimed in claim 23, ~~24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 or 36,~~ wherein a thickness of said wet coating layer is at most 50 μ m.

38. (original) A drying apparatus for drying a coating layer which is formed by coating a moving web with a coating solution containing organic solvent, comprising:

a drying device disposed at a transporting position just after the coating, while a casing surrounds said web so as to prevent disturbance of wind closed to a coating surface; and

a heating means disposed within said drying device for controlling a temperature difference $|T_3 - T_1|$ at most 5°C between a temperature T_1 of said coating layer at an entrance of said drying device and a temperature T_3 of said coating layer in said drying device.

39. (original) A drying apparatus for drying a coating layer which is formed by coating a moving web with a coating solution containing organic solvent, comprising:

a drying device disposed at a transporting position just after the coating, while a casing surrounds said web so as to prevent disturbance of wind closed to a coating surface; and

a heating means disposed within said drying device for controlling a temperature difference $|T_2 - T_1|$ at most 5°C between a temperature T_1 of said coating layer at an entrance of said drying device and a temperature T_2 of said coating layer at an exit of said drying device.

40. (currently amended) A drying apparatus claimed in claim 38 [[or 39]], wherein there is a device for condensing and recovering an organic solvent in said coating solution on said coating surface at said transporting position of said web within said drying device.

41. (currently amended) A drying apparatus claimed in claim 38, ~~39 or 40~~, wherein a blow-drying apparatus is disposed downstream from said drying device.